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EXAMINER	
TORRENTE, RICHARD T	

ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/520,168	HUH ET AL.	
	Examiner	Art Unit	
	RICHARD TORRENTE	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 11-13, 15, 21, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Niikura et al. (US 5,911,008).

Regarding claim 1, Niikura discloses a system to estimate a color temperature (see 1503 in fig. 15; see "hue" in column 15, lines 60-63) of a compressed video image (see 86 in fig. 15) and change the color temperature (see 1505 and 88 in fig. 15) of the compressed video image, the system comprising: a direct current (DC) video image extraction section (see 1501 in fig. 15) to extract DC coefficients of each of a plurality of discrete transformation blocks from the compressed video image, each of the DC coefficients representing an average value of pixel values of each of the respective discrete transformation blocks of an original video image (see column 18, lines 6-10; see 1502 in fig. 15), define the DC coefficients as pixel values (see 1502 in fig. 15;), and generate a DC video image composed of the pixel values (see 1502 in fig. 15; column 18, lines 9-10); and a color temperature estimation section (see 1503 in fig. 15)

to estimate a color temperature (see column 15, lines 56-63) of the compressed video image (see 88 in fig. 15) using the color temperature of the generated DC video image.

Regarding claims 2, 12 and 30, Niikura further discloses comprising: a decoder to decode the compressed video image to generate the original video image (see column 21, lines 41-44); and a color temperature change unit (e.g. see 87 in fig. 8) to determine the estimated color temperature of the compressed video image or a color temperature of the decoded original video image as an application color temperature according to whether the compressed video image is a moving video image (see 89 in fig. 8), and change the color temperature (see 1505 in fig. 15) of the decoded original video image in accordance with the application color temperature and a color temperature preferred by a user (see column 21, lines 41-44).

Regarding claims 3 and 13, Niikura further discloses wherein the DC coefficients of each of the discrete transformation blocks are obtained by multiplying discrete transformation coefficients with respect to coordinates (0,0) of each of the discrete transformation blocks by a predetermined constant (see 1501 in fig. 15) in response to the compressed video image being a still video or an internally coded moving video image (e.g. see 87 in fig. 8).

Regarding claims 5, 15, 21 and 31, Niikura further discloses wherein the color temperature change unit comprises: an application color temperature determination

section (see 1501 in fig. 15) to determine the estimated color temperature" of the compressed video image or the color temperature of the decoded video image as the application color temperature according to whether the compressed video image is a moving video image (e.g. see 87 in fig. 8); and a color temperature change section to receive the color temperature preferred by the user and change the color temperature of the decoded video image in accordance with the application color temperature.

Regarding claim 11, the claim(s) recite analogous limitations to claim 1, and is/are therefore rejected on the same premise.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4, 6-9, 14, 16-19, 22, 23, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niikura et al. (US 5,911,008) in view of Wee et al. (US 6,104,441).

Regarding claims 4 and 14, Although Niikura discloses wherein the DC coefficients of each of the discrete transformation blocks of a current frame are

calculated corresponding to a previous frame (see 1503 in fig. 15), it is noted that Niikura does not discloses wherein the DC coefficients of each of the discrete transformation blocks of a current frame are calculated as a sum of terms corresponding to four blocks of a previous frame in response to the compressed video image being an interframe-coded moving video image; and wherein each of the terms is determined as a product of a ratio of an overlapping area of a discrete transformation block whose DC coefficients of the current frame are to be extracted and discrete transformation blocks of a previous frame to the area of the discrete transformation blocks of the previous frame and DC coefficients of each discrete transformation block of the previous frame.

However, Wee, in the same field of endeavor, discloses an interframe motion compensation wherein the DC coefficients of each of the discrete transformation blocks of a current frame are calculated as a sum of terms corresponding to four blocks of a previous frame in response to the compressed video image being an interframe-coded moving video image (see fig. 10. Note that the DC is within the DCT); and wherein each of the terms is determined as a product of a ratio of an overlapping area of a discrete transformation block whose DC coefficients of the current frame are to be extracted and discrete transformation blocks of a previous frame to the area of the discrete transformation blocks of the previous frame and DC coefficients of each discrete transformation block of the previous frame (see fig. 10).

Given the teachings as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Wee teachings of DC

interframe-compensation into Niikura DC compensation as an upgrading for the benefit of enabling real time editing with interframe images.

Regarding claims 6-9, 16-19, 22, 23, 26 and 27, Although Niikura discloses wherein the application color temperature determination section compares a first color temperature difference between an estimated color temperature of the DC video image of a current frame and an estimated color temperature of the DC video image of a previous frame with a first predetermined critical value (see 1503 in fig. 15) in response to the compressed video image; and determines the application color temperature of the current frame by adding a correction function to the application color temperature of the previous frame (see 1505 in fig. 15); receives a decoded current frame from the decoder (see input to 10 in fig. 5), estimates the color temperature from the decoded current frame (see 12 in fig. 5), it is noted that Niikura does not disclose wherein the compressed video image being interframe coded with a predetermined values to determine a final color temperature.

Wee, in the same field of endeavor, discloses wherein the compressed video image being interframe coded; and determines the application color temperature of the current frame by adding a correction function (see 373 in fig. 10) to the application color temperature of the previous frame; calculates a second color temperature difference (see 313 in fig. 8) between the estimated color temperature of the DC video image of the current frame (see 313 in fig. 8) and the estimated color temperature of the decoded current frame (see 313 in fig. 8, where the decoded frame is now a reference frame),

and compares the second color temperature difference with a predetermined second critical value (see 314 in fig. 8) in response to the first color temperature difference being larger than the first critical value (see 313 in fig. 8 and 373 in fig. 10); and determines the estimated color temperature of the DC video image of the current frame as the application color temperature of the current frame in response to the second color temperature difference being less than the second critical value (see 315 in fig. 8); and determines the estimated color temperature of the DC video image of the decoded current frame as the application color temperature of the current frame in response to the second color temperature difference being larger than the second critical value (see 317 in fig. 8); wherein the first color temperature difference are obtained by multiplying inverse numbers (see 373 in fig. 10) of each color temperature by a predetermined coefficient (see 373 in fig. 10).

Given the teachings as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Wee teachings of DC interframe-coding with predetermined calculations into Niikura DC coding for the benefit of upgrading the system to include interframe-coding. Interframe-coding reduces bandwidth by not transmitting repeated frames.

5. Claims 10, 20, 24, 25, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niikura et al. (US 5,911,008) in view of Wee et al. (US 6,104,441), and further in view of Applicant Admitted Prior Art (AAPA).

Regarding claims 10, 20, 24, 25, 28 and 29, Niikura and Wee does not disclose wherein the first and second critical values are approximately 200.degree. K.

However, AAPA disclose wherein the first and second critical values are approximately 200.degree. K (see P [0005]).

Given the teachings as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate AAPA teachings of color temperature calculation into Liu color conversion system for the benefit of improving the correction of brightness of an image by having a numerical gauge as a reference.

Response to Arguments

6. Applicant's arguments filed 5/4/10 have been fully considered but they are not persuasive.

Applicant argued that Niikura does not disclose color temperature and estimating color temperature. The Examiner respectfully disagrees. Applicant discloses in P [0007] of the specification that color temperature is equivalent to "hue or RGB". Niikura column 15, lines 60 clearly disclose that fig. 15 deals with hue and estimating hue. Thus, the Examiner maintains all limitations are met.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD TORRENTE whose telephone number is (571) 270-3702. The examiner can normally be reached on M-F: 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Richard Torrente/
Examiner, Art Unit 2621

/Young Lee/
Primary Examiner, Art Unit 2621

RT